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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,890	05/11/2001	Luc Wuidart	S1022/8628	6158

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EXAMINER

LINNENKAMP, NICHOLAS L

ART UNIT	PAPER NUMBER
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2635

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,890

Applicant(s)

WUIDART, LUC

Examiner

Nicholas L Linnenkamp

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/2/042.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.6.7.8.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ekchian et al (heretofore Ekchian).

In regards to claim 1, Ekchian teaches of a terminal **(transceiver 14)** for generating a high-frequency electromagnetic field by means of an oscillating circuit **(transceiver 14 contains oscillating circuit as shown in fig 5, characterized by 1 MHz crystal oscillator 50)**, adapted to cooperating with at least one transponder **(shown in Fig 3, Fig 4)** when said transponder enters this field, and including:

- Means for regulating a signal phase in the oscillating circuit with respect to a reference value **(Phase locked loops 54, 56, 58 regulate the signals phase)**
- Means for evaluating, based on a measurement of a current in the oscillating circuit, a minimum number of transponders present in the field **(Antenna 18 measures the signal strength reflected back towards the transceiver 14, which determines the number of transponders near the transceiver, a minimum measurement. Signal strength is a measure of reflected current and/or voltage).**

The examiner notes that voltage and current have a proportional relationship and one can be determined from the other knowing the impedance of the circuit.

In regards to claim 2, claim 1 is taught as above. Ekchian teaches that terminal includes a means, based on a measurement of voltage across a capacitive element of the oscillating circuit, for evaluating the maximum number of transponders present in the terminal's field **(As above in claim 1, transceiver measures signal strength and determines the number of transponders near the transceiver, also a maximum measurement. Signal strength is a measure of reflected current and/or voltage).**

In regards to claim 3, claim 1 is taught as above. Ekchian teaches that the terminal includes a means for determining and storing characteristic information relative to voltages across the capacitive element of its oscillating circuit and to currents in this oscillating circuit, in several determined configurations of a distance separating one or several transponders from the terminal, and for taking these characteristic information into account in evaluating the number of transponders **(Fig 11 is a representation of characteristic information, such as a transfer function, determined at a known distance from a single transponder, Col 2 lines 64-65, sonar ranging device 32 determines the distance the transceiver/reader is away from the transponder and uses the proper transfer function to determine number of units, Col 5 lines 59-64, Col 6 lines 1-56, particularly equation 7).**

In regards to claim 4, claim 3 is taught as above. It would have been within the scope of Ekchian's invention to provide a transfer function for voltage or current at any distance from a transponder.

In regards to claim 5, claim 1 is taught as above. Ekchian teaches that system does not interpret possible data messages carried by the high-frequency field (**Fig 3 and 4, show that the transponders are not adapted for bi-directional communications**).

In regards to claim 6, Ekchian teaches of a method for establishing at least one communication between a terminal generating a high-frequency magnetic field and an electromagnetic transponder, including periodically sending a request sequence until at least one transponder entering the field sends an acknowledgement (**transceiver 14 transmits a continuous hello signal and listens for an echoing reply from transponder 22 at a differing frequency**), and of evaluating, based on a measurement of a current in an oscillating circuit of the terminal, a minimum number of transponders likely to be present in the field (**method of determining number of transponders similar to device as taught in claim 1**).

Thus Ekchian anticipates claims 1-6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ekchian.

In regards to claim 7, claim 6 is taught as above. Ekchian teaches that evaluation of characteristic information for a single transponder at a given distance is required to make a determination of the number of transponders in the radiating field as in claim 1. Ekchian does not teach that evaluation includes comparing for several minimum numbers of transponders.

It would have been obvious to one skilled in the art at the time of invention to evaluate characteristic information for any number of transponders in order to make a better judgment on the number of transponders present. In addition, Ekchian determines the number of transponders present by multiples of the characteristic information present (**see claim 1**), thus Ekchian notes that each transponder provides identical contributions to reflected signal.

In regards to claim 8, claim 6 is taught as above. Ekchian does not specifically teach the method for evaluating the number of transponders in the field is based upon a

minimum measurement and on a measurement of a present voltage across a capacitive element of the oscillating circuit.

Ekchian determines the number of transponders in the area through a measure of signal strength thus making a minimum and maximum determination in the same step.

Ekchian does not specify how he measures signal strength, although it is known in the art that signal strength is a measure of voltage and/or current.

It would have been obvious to one skilled in the art at the time of invention to use voltage and/or current through the transceiver **(whichever was convenient, including using both)** to determine the signal strength of the reflected signal in order to make an accurate determination of the number of transponders in the radiated area **(As shown by Ekchian in claim 2)**.

Thus Ekchian teaches all the limitations of claims 7 and 8.

It is noted that WO 99/43096 describes a monitoring circuit **203** for determining the voltage or the current of the received signal in order to perform analysis and control functions which would be suitable for Ekchian's transceiver for determining the incident voltage or current from the transponder **(Page 6, lines 9-13)**.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas L Linnenkamp whose telephone number is (703) 305-8701. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (703) 305-4704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nicholas L Linnenkamp
Examiner
Art Unit 2635

NLL

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

